

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 14-26 have been cancelled in favor of new claims 35-49. Support for the subject matter of the new claims is provided for example in the original claims, Applicants' Figs. 23 and 28, and paragraphs [0259]-[0281] of the published specification. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to any particular aspect of the referenced embodiments.)

Claims 1-13 and 27-34 stand withdrawn as being directed toward non-elected subject matter.

Claims 14, 15, and 23-26 were rejected, under 35 USC §103(a), as being unpatentable over Bjerke et al. (US 2003/0103584) in view of Lee et al. (US 2003/0060173). Claims 14, 15, and 23-26 were also rejected, under 35 USC §103(a), as being unpatentable over Bjerke in view of Lee and Matsumoto et al. (US 2004/0199846). To the extent these rejections may be deemed applicable to new claims 35-49, the Applicants respectfully traverse as follows.

Claim 35 defines a transmission method that: (1) interleaves a first data sequence into a first interleaved data sequence using a first interleaving pattern in which an output order pattern of the first data sequence is a different from an input order pattern of the first data sequence and (2) interleaves a second data sequence into a second interleaved data sequence using a second interleaving pattern in which an output order pattern of the second data sequence is a different

from the output order pattern of the first data sequence. The claimed subject matter provides an advantage of improving reception performance (see Applicants' Fig. 27 and paragraph [0275]).

Bjerke discloses, in Fig. 2B, types of interleavers (see Bjerke ¶ [0067]), but does not disclose that the interleaving schemes (i.e., interleaving patterns) applied by channel interleaver 214a and channel interleaver 214t are different interleaving schemes. Although Lee discloses that first and second interleavers may use different interleaving patterns (see Lee paragraph [0093]), Lee does not disclose the Applicants' claimed subject matter of different output order patterns. Matsumoto is not cited in the Office Action for supplementing the teachings of Bjerke and Lee with respect to different output patterns. The Applicants' claimed invention improves reception performance at a receiving end by providing different output order patterns.

Accordingly, Applicants submit that the teachings of Bjerke, Lee and Matsumoto, even if combined as proposed in the Office Action, still would lack the above-noted feature of claim 35, and thus these references, considered individually or in combination, do not render obvious the subject matter defined by claim 35. Independent claim 43 similarly recites the subject matter distinguishing method claim 35 from the applied references, but with respect to an apparatus. Therefore, allowance of claims 35 and 43 and all claims dependent therefrom is deemed to be warranted.

Claim 36 depends from base claim 35 and recites that: (1) an amount of data interleaved by a first interleaving pattern equals an amount given by multiplying an amount of all subcarriers included in a first orthogonal frequency division multiplexing symbol by an amount of bits transmitted by one first modulated symbol, (2) an amount of data interleaved by a second interleaving pattern equals an amount given by multiplying an amount of all subcarriers included

in a second orthogonal frequency division multiplexing symbol by an amount of bits transmitted by one second modulated symbol, and (3) the amount of data interleaved by the first interleaving pattern and the amount of data interleaved by the second interleaving pattern are the same. It is submitted that each of Bjerke, Lee, and Matsumoto fails to disclose this subject matter.

Accordingly, Applicants submit that the teachings of Bjerke, Lee and Matsumoto, even if combined as proposed in the Office Action, still would lack the above-noted features of claim 36, and thus these references, considered individually or in combination, do not render obvious the subject matter defined by claim 36. Independent claim 44 similarly recites the subject matter distinguishing method claim 36 from the applied references, but with respect to an apparatus. Therefore, allowance of claims 36 and 44 is deemed to be warranted.

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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